

Claims

1. Planar lightwave circuit comprising an optical device, where the optical device comprises at least one piece of waveguide structure, in particular a piece of fiber, which has at least one thin film layer deposited on an end facet.

2. Planar lightwave circuit according to claim 1, wherein the thin film is a filter or a saturable absorber.

3. Planar lightwave circuit wherein the optical device is provided in a recess of the planar lightwave circuit.

4. Planar lightwave circuit according to claim 1, wherein an index-matching material is located between the optical device and the planar lightwave circuit.

5. Planar lightwave circuit according to claim 1, wherein the planar lightwave circuit is a duplexer.

6. Fiber array comprising at least one bundle of fibers where at least at one end the end facets of the fibers comprise a thin film.

7. Method of processing an optical device comprising the following steps:

c) sawing of a fiber into pieces or a fiber array into plates at a predefined angle with respect to the fiber axis

d) deposition of at least one thin film on at least one end facet of the fiber piece or the fiber array plate.

8. Method according to claim 7, wherein the array of fibers is obtained by first bundling individual fibers to a fiber bundle , where the fibers are held together by a matrix material and second by joining the fiber bundles to a fiber array using the matrix material for holding together the fiber bundles, and third consolidating the matrix material.

9. Method according to claim 7, wherein the fiber end facet is polished prior to deposition of the thin film.

10. Method according to claim 7, wherein the fiber pieces of the fiber array plate are separated after thin film deposition.